



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

DEVAL L. PATRICK
Governor

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Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

Date Stamped December 5, 2012

Ms. Sherri Gaudette
Skyworks Solutions, Inc.
20 Sylvan Road
Woburn, MA 01801

RE: **WOBURN** - Metropolitan
Boston/Northeast Region
310 CMR 7.02 NON-MAJOR
COMPREHENSIVE PLAN APPLICATION
Transmittal No. W051720
Application No. MBR-04-IND-025
FINAL APPROVAL

Dear Ms. Gaudette:


The Metropolitan Boston/Northeast Regional Office of the Department of Environmental Protection, Bureau of Waste Prevention, (Department) has completed its technical review of the plan application listed above. This application concerns the installation of a new process, several abatement systems to control inorganic as well as volatile organic compound emissions, and the increased production capacity of an existing process at your facility located at 20 Sylvan Road in Woburn, Massachusetts. In addition, this non-major comprehensive plan application seeks to establish federally enforceable emissions limitations for the entire facility. The submitted application bears the seal and signature of Mr. Paul Murphy, Massachusetts P.E. No. 41840.

The Department has determined that your application is administratively and technically complete and that the subject equipment is in conformance with current air pollution control engineering practices. Therefore, the Department hereby grants **Final Approval** for the subject equipment, with the conditions listed below.

Please review the entire **Final Approval** carefully, as it stipulates the particular conditions with which the facility owner/operator must comply in order for the facility to be operated in compliance with the Regulations. Failure to comply with this **Final Approval** will constitute a violation of the Regulations and can result in the revocation of the **Final Approval**.

This information is available in alternate format by calling our ADA Coordinator at (617) 556-1171.

One Winter Street, Boston, MA 02108 • Phone (617) 654-6500 • Fax (617) 654-6510 • TTD# (800) 298-2207

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A. EQUIPMENT DESCRIPTION

Skyworks Solutions, Inc. ("Skyworks") is a semiconductor manufacturing facility located at 20 Sylvan Road in Woburn, Massachusetts. Skyworks designs, develops, and markets proprietary radio frequency and millimeter wave frequency integrated circuits and discrete semiconductors for the wireless and broadband communications markets. The existing facility and its operations were approved by the Department via the following Approvals: Approval No. MBR-91-IND-013, Approval No. MBR-95-IND-073, Approval No. MBR-01-IND-029, Approval No. MBR-04-IND-012, and Approval No. MBR-85-COM-100.

On October 16, 2012, Skyworks submitted a written request to finalize Conditional Approval MBR-04-IND-025, issued to you on January 7, 2005. In addition, Skyworks proposed physical changes of its facility including the modification, relocation, and removal of existing process equipment, and the installation of new process equipment to perform the same functions as the existing process equipment at the facility. Skyworks anticipates that there will be a decrease in chemical usage and actual emissions from the semiconductor manufacturing processes at the facility following these physical changes, due to expected process efficiency improvements. The increases in potential emissions from the new process equipment, after control, and without netting out the reduction in potential emissions from the process equipment to be removed, will not exceed one ton per 12-month period for any contaminant.

The proposed physical changes at the facility involve the following emission sources:

- Removal of one existing Omega MORI etcher.
- Removal of two existing Temescal wafer processing tools.
- Removal of one existing GMN grinder.
- Removal of two existing bake ovens.
- Modification of one existing TEL-6 polyimide coater to allow for the manufacturing of larger sized wafers¹.
- Modification of one existing TEL-9 backside coater to allow for the manufacturing of larger sized wafers¹.
- Modification of one existing TEL-5 coater to BCB (bisbenzocyclobutane)¹.
- Modification of one existing SSEC SST02 wafer processor to allow for the manufacturing of larger sized wafers¹.
- Modification of two existing Novellus etching tools to allow for the manufacturing of larger sized wafers^{2,3}.
- Installation of four new SSEC Model 3305 automated single wafer wet processing and cleaning systems¹.
- Installation of two new TEL ACT coater/developers and the modification of an existing TEL ACT coater/developer to accommodate the manufacturing of the larger sized wafers¹.
- Installation of three new Plasmatherm Versaline process modules^{3,4}.
- Installation of two new MEI Revolution automated rotary wet processing systems^{2,4}.
- Installation of four new MEI Gemini dual robot semi-wet benches^{2,4}.
- Installation of two new platers (copper & gold)⁴.

- Installation of one new SSEC automated single wafer wet processing and cleaning system¹.

The emissions from the new and modified process equipment shall be captured and controlled by the existing emissions capture and control systems authorized by the previous Conditional Approval and this Final Approval.

¹ Emissions from the unit(s) will be controlled by the existing Munter RC/TO_x

² Emissions from the unit(s) will be controlled by the existing Monroe PB-300-10 scrubber

³ Emissions from the unit(s) will be controlled by the existing Harrington ECH 4.5-5 scrubber

⁴ Emissions from the unit(s) will be controlled by the existing Harrington ECH 7 8-5 scrubber

EXISTING PROCESSES

The existing processes at the subject manufacturing facility are Silicon Fabrication, Silicon Epi, GaAs Fab-Backside, GaAs Fab Photo, Silicon Photo, GaAs Fab Metals, GaAs Fab Wet-Pro, Molecular Beam Epitaxy, and GaAs Fab Etch.

EXISTING CONTROL DEVICES

Table I below contains a description of each of the existing air pollution control devices and their level of removal efficiency.

Table I. Existing Air Pollution Control Equipment

Manufacturer/Model No.	Type of Control	Percent Control Efficiency by Weight	Process(es) Controlled
Monroe PB-300-10 ²	Wet scrubber	98%	GaAs Backside, Metals, & Wet-Pro
Harrington/ECH 7 8-5 LB	Wet scrubber	98%	Silicon Fab
Harrington/ECH 4 5-5	Wet scrubber	98%	GaAs Etch & Metals
Custom Point of Use	Wet scrubber	N/A ¹	Diffusion Furnaces in Silicon Fab
Gemini I & II	Wet scrubber	N/A ¹	Gemini Reactor in Silicon Epi
2 Air Guard Point of Use Scrubbers	Wet scrubber	N/A ³	Plasma Therm Etch

¹ No credit has been taken for emission reduction for the custom point of use and Gemini I & II wet scrubbers. These scrubbers are listed for informational purposes only. These scrubbers discharge to the Harrington Model ECH 7 8-5 LB wet scrubber.

² Monroe PB-300-10 wet scrubber was installed to replace an existing Harrington/HPH-675 wet scrubber.

³ No credit has been taken for emission reduction for the Air Guard point of use wet scrubbers. These scrubbers are listed for informational purposes only. These scrubbers discharge to the Harrington/ECH 4 5-5 wet scrubber.

The existing Harrington Model HPH 67-5 PB packed bed scrubber was originally approved through Approval MBR-91-IND-013. This scrubber was replaced in August of 2012 with a Monroe PB-300-10 packed bed scrubber. This scrubber is capable of handling 30,000 standard cubic feet per minute (scfm) of process air. The wet scrubber utilizes water as its scrubbing liquid to control the acid and caustic mists from the GaAs Backside, Metals, & Wet-Pro processes. The normal scrubbing liquid flow rate is 300 gallons per minute with a pH of 7.5 – 9.0. The packing material consists of about 8 feet of polypropylene media.- The new scrubber will remove a minimum of 98 percent by weight of the inlet inorganic acid gas emissions. Maximum hourly emission rates are 2.9 pounds per hour (lb/hr) of ammonium compounds (the scrubber was not designed for removal of ammonium compounds) and 1.0 lb/hr of inorganic acid, after control.

The existing Harrington Model ECH 4 5-5 LP packed bed scrubber was originally approved through Approval No. MBR-01-IND-029 to control the emissions from the “Six-Inch” Line. Through Approval No. MBR-04-IND-012, the Department approved proposed modifications to the unused “Six-Inch” Line to allow for the installation of the GaAs Etch & Metals processes. This scrubber now controls emissions from the GaAs Etch & Metals processes and is capable of handling 10,000 scfm of process air. This wet scrubber utilizes water as its scrubbing liquid to control the acid and caustic mists from the GaAs Etch & Metals processes. The normal scrubbing liquid flow rate is 100 gallons per minute with a pH of 7.5 – 9.0. The packing material consists of about 8 feet of 3.5 inch Lanpac polypropylene media. The scrubber removes a minimum of 98 percent by weight of the inlet inorganic acid gas emissions. Maximum hourly emission rates are 1.2 lb/hr of ammonium compounds (the scrubber was not designed for removal of ammonium compounds) and 1.0 lb/hr of inorganic acid, after control.

EXISTING PREVIOUSLY APPROVED OPERATIONS/EQUIPMENT

Skyworks Solutions installed and operates a “Thick Polymer” process and received written Department approval to increase its existing capacity for its Molecular Beam Epitaxy (MBE) process at its Woburn facility. The “Thick Polymer” process has the potential to generate uncontrolled VOC emissions of 7.5 tons during its first twelve-month rolling calendar period. A new Roto-Concentrator followed by a thermal oxidizer (RC/TOx) was installed to control this process as well as many of the other existing volatile organic compounds/hazardous air pollutants (VOC/HAPs) emitting processes at the facility. (See C.3)

The Munters Corporation Model No. IZS-3546-TH RC/TO_x, has a maximum air flow capacity of 30,000 standard cubic feet per minute (scfm). This RC/TO_x is equipped with an Eclipse burner which burns natural gas as the only fuel of use at a maximum energy input capacity of 2,000,000 B.t.u. per hour.

The cross sectional area of the oxidizer's combustion chamber is 15 square feet with a length of 15 feet. The effective chamber volume of 225 cubic feet provides a minimum retention time of 1 second at an outlet flow rate of approximately 2,300 actual cubic feet per minute (acfm) at a minimum combustion chamber temperature of 1375 °F. A Honeywell temperature-indicating controller (or equivalent) with a minimum combustion chamber temperature set point of 1375 °F controls the burner's natural gas valve so as to prevent the combustion chamber temperature from falling below 1375 °F. Skyworks may be able to demonstrate compliance at a lower combustion chamber temperature. Skyworks will confirm the combustion chamber temperature performance during the required compliance testing (see Special Condition No. 7) and upon written Department approval may operate the RC/TO_x at the new temperature. The thermocouple is located at the exit point of the oxidation chamber. A continuous temperature chart recorder records the temperature of this thermocouple. The overall control efficiency of the RC/TO_x is 98 percent by weight for VOC and HAPs or a maximum hourly VOC and HAPs emission rate of 1.0 pound per hour, whichever is least stringent. These criteria as well as the capture efficiency of the permanent total enclosures (PTEs) shall be demonstrated in the required compliance testing in Special Condition No. 7 via the United States Environmental Protection Agency's (USEPA) Alternative Method 020.

The controlled process air is vented through a new vertical carbon steel stack. The opening of the stack is at least 40 feet above ground level and at least 10 feet above the rooftop. The inside exit diameter of the stack is 38 inches which results in a maximum gas exit velocity of 70 feet per second at 250 °F.

The emissions from the Silicon Fab operation vent to atmosphere after control by the Harrington Environmental Engineering, Inc. (Harrington) Model ECH 7 8-5 LB wet scrubber. This scrubber is capable of handling 30,000 scfm of process air. The wet scrubber utilizes water as its scrubbing liquid to control the acid and caustic mists from the plating operations. The normal scrubbing liquid flow rate is 336 gallons per minute with a pH of 7.0 – 9.0. The packing material consists of 5 feet of 3.5 inch Lanpac polypropylene media. The scrubber removes a minimum of 98 percent by weight of the inlet inorganic acid gas emissions. Maximum hourly emission rates are 0.1 lb/hr of ammonium compounds (the scrubber was not designed for removal of ammonium compounds) and 1.0 lb/hr of inorganic acids, after control.

B. EMISSION LIMITS

Tables II and III contain the Final Emission Limits for the Entire Facility.

Table II. Final Monthly Facility-wide Emission Limits

Process	VOC ^a	NO _x ^b	SO ₂ ^c	PM ^d	CO ^e	All Other Non-criteria	Total HAPs ^f	Inorganic Acids
Facility-wide	1.0	5.0	6.0	2.5	1.0	2.0	2.1	2.8

^a VOC – volatile organic compounds

^b NO_x – nitrogen oxides

^c SO₂ – sulfur dioxides

^d PM – particulate matter

^e CO – carbon monoxide

^f Total HAPs – total hazardous air pollutants

Table III. Final Facility-wide Emission Limits
(tons per twelve month rolling calendar period)

Process	VOC ^a	NO _x ^b	SO ₂ ^c	PM ^d	CO ^e	All Other Non-criteria	Total HAPs ^f	Inorganic Acids
Facility-wide	4.5	19.8	25.6	5.8	4.7	5.0	6.7	8.5

^a VOC – volatile organic compounds

^b NO_x – nitrogen oxides

^c SO₂ – sulfur dioxides

^d PM – particulate matter

^e CO – carbon monoxide

^f Total HAPs – total hazardous air pollutants

1. Skyworks currently ships hazardous waste off site. The amount of waste shipped out will continue to be tracked and subtracted from the facility's overall air emissions.
2. The RC/TO_x shall provide an overall destruction efficiency of 98 weight percent for VOC/HAP or a maximum hourly VOC/HAP emission rate of 1.0 pound per hour, whichever is least stringent. The associated permanent total enclosures (PTEs) shall provide 100% capture efficiency.
3. The Harrington Model ECH 7 8-5 LB wet scrubber, controls the Silicon Fab operations by providing an overall removal efficiency of 98 weight percent for inorganic acids or a maximum hourly inorganic acid emission rate of 1.0 pound per hour, whichever is least stringent.

4. The existing Harrington Model ECH 4 5-5 LB wet scrubber, serving the GaAs Etch & Metals processes, shall provide an overall removal efficiency of 98 weight percent for inorganic acids or a maximum hourly inorganic acid emission rate of 1.0 pound per hour, whichever is least stringent.
5. The new Monroe PB-300-10 wet scrubber, serving the GaAs Backside, Metals, & Wet-Pro processes, shall provide an overall removal efficiency of 98 weight percent for inorganic acids or a maximum hourly inorganic acid emission rate of 1.0 pound per hour, whichever is least stringent.

C. OPERATIONAL AND USAGE REQUIREMENTS

Skyworks shall comply with the following operational and usage requirements:

1. All VOC and HAP containing materials, such as solvents and cleanup solutions, shall be transported and stored in tightly covered containers.
2. All cleaning rags used in conjunction with the cleaning solutions shall be placed in tightly covered containers when not in use, and shall be collected for proper recycling or disposal.
3. Upon installation and debugging of the RC/TO_x, the VOC-laden exhaust from the following processes shall be vented to the RC/TO_x for appropriate abatement at all times:
 - Backside
 - GaAs Photo
 - Sil Photo
 - Silicon Fab
 - Metals
 - Wet-Pro
 - GaAs Etch
 - Thick Polymer
4. Upon installation and debugging of the proposed Harrington Model ECH 7 8-5 LB wet scrubber, the process air from the Silicon Fab and diffusion operations shall be vented to this scrubber for appropriate abatement at all times.
5. The process air from the GaAs Etch & Metals processes shall be vented to the existing Harrington Model ECH 4 5-5 LB wet scrubber for appropriate abatement at all times.

6. The process air from the GaAs Backside, Metals, and Wet-Pro processes shall be vented to the new Monroe PB-300-10 wet scrubber for appropriate abatement at all times.
7. The two existing Cleaver-Brooks Model No. CB 200-125 boilers shall burn either natural gas or fuel oil with a sulfur content less than 0.3% by weight.
8. The new RC/TO_x shall utilize natural gas as its only fuel.

D. SPECIAL CONDITIONS

1. That this Final Approval (MBR-04-IND-025) supersedes Approval letters MBR-85-COM-100, MBR-91-IND-013, MBR-95-IND-073, MBR-01-IND-029, and MBR-04-IND-012, as well as Conditional Approval MBR-04-IND-025, in their entirety.
2. That should any nuisance condition(s) be generated by the operation of this facility, then appropriate steps shall immediately be taken by Skyworks to abate said nuisance condition(s).
3. That the emissions resulting from the operation of this facility shall be specified on the Emission Statement Forms submitted by Skyworks to the Department as required by Regulation 310 CMR 7.12.
4. That a copy of this Final Approval letter shall be posted at or near the RC/TO_x and the three wet scrubbers.
5. That while operating, the RC/TO_x's outlet temperature shall be recorded with a temperature monitoring and recording equipment using a one day or seven day chart recorder for ease of inspection. The temperature records shall be maintained on-site for a minimum of five years, and shall be made available to Department personnel upon request.
6. That for compliance testing purposes, the inlet sampling ports on the RC/TO_x and the wet scrubbers must be located on the inlet stream of each of the four subject air pollution control devices. The outlet sampling port must be located downstream of each of the three air pollution control devices and upstream of any dilution or recirculation streams. Each of the inlet and outlet sample ports must be located at a minimum of one duct diameter upstream and two duct diameters downstream of any flow disturbance in accordance with 40 CFR 60, Appendix A, Method 1.

7. By no later than August 31, 2017, a compliance test of the RC/TO_x shall be performed using methods approved by the Department in writing and as witnessed by Department personnel. The compliance testing of the subject RC/TO_x must demonstrate, at minimum: a) whether or not the enclosures around each controlled process comply with the United States Environmental Protection Agency's (USEPA) Alternative Method 020 as a means of demonstrating capture efficiency; b) the VOC and HAPs destruction/removal efficiency of the RC/TO_x system; and c) the maximum hourly VOC and HAP emission rates, after control, in pounds per hour. The compliance testing procedures must follow USEPA and Department methods and guidelines. At least thirty (30) days prior to the commencement of compliance testing at its facility, Skyworks shall submit a pretest protocol to this Office for review and written Department approval. This protocol shall describe the test methodologies to be employed during the required compliance testing. A final compliance test results report must be submitted by Skyworks to this Office, attention Permit Chief for the Bureau of Waste Prevention, within sixty (60) days of completion of the above required compliance testing.
8. By no later than April 30, 2013, a compliance test shall be performed on the Monroe PB-300-10 wet scrubber, using methods approved by the Department in writing and as witnessed by Department personnel. The compliance testing of the subject scrubbers must demonstrate, at minimum: a) whether or not the enclosures around each controlled process comply with the United States Environmental Protection Agency's (USEPA) Alternative Method 020 as a means of demonstrating capture efficiency; b) the overall removal efficiency of each wet scrubber system; and c) the maximum hourly HAP and inorganic acid emission rates, after control, in pounds per hour. The compliance testing procedures must follow USEPA and Department methods and guidelines. At least thirty (30) days prior to the commencement of compliance testing at its facility, Skyworks shall submit a pretest protocol to this Office for review and written Department approval. This protocol shall describe the test methodologies to be employed during the required compliance testing. A final compliance test results report must be submitted by Skyworks to this Office, attention Permit Chief for the Bureau of Waste Prevention, within sixty (60) days of completion of the above required compliance testing.
9. Skyworks shall complete additional emissions testing of the subject air pollution control systems and their associated PTEs, at least once every five years or whenever the Department otherwise deems such as necessary.

10. That for each of the subject air pollution control devices, a copy of the Standard Operating and Maintenance Procedure (SOMP) shall be located at or nearby each of the air pollution control device's control panel. Each air pollution control device's start-up specifications shall be incorporated into the SOMP. Each SOMP shall address the spare parts inventory and back-up equipment systems for each air pollution control system to prevent or reduce any downtime of the air pollution control system. In addition, a copy of any subsequent revisions made to the SOMP must be submitted to this Office within seven (7) days of the revision.
11. Skyworks shall maintain operating and preventative maintenance logs to document the proper operation and maintenance conducted on each subject air pollution control device in accordance with its SOMP.
12. Should either the RC/TO_x or any of the subject wet scrubbers become inoperable for any reason, Environmental Health and Safety personnel must be notified within 15 minutes of security receiving the alarm. If any of these subject air pollution control devices become inoperable for more than 2 hours, Skyworks shall notify the Department within one business day by fax, attention Bureau of Waste Prevention Compliance & Enforcement Chief, at (617) 654-6510 and subsequently in writing within seven (7) days of occurrence describing the reason(s) for and the extent of down time of the equipment and all steps that have been or will be taken to prevent said occurrence from recurring. Skyworks will take immediate action to minimize emissions and diagnose and repair the problem.
13. Should the RC/TO_x fail or fall below its designated operating temperature of 1375 °F, an alarm shall actuate in all photo areas to cease all operations. The current batch runs will be allowed to go to completion. The system may bypass the RC/TO_x for a period of no more than 8 hours, after which point, no VOC or HAPs emissions are allowed.
14. The bypass system design information shall be submitted to the Department for review before it is installed.
15. That an electronic interlock system shall prevent introduction of the exhaust stream from the subject processes to the associated RC/TO_x until the RC/TO_x has achieved the minimum oxidation temperature of 1375 °F.
16. Skyworks shall comply with all of the EMISSION LIMITS contained in Section B. and shall adhere to the OPERATIONAL AND USAGE REQUIREMENTS contained in Section C. above.

17. Skyworks shall maintain adequate on-site records to document compliance with the emission caps as stated in Section B on monthly as well as consecutive twelve-month rolling calendar periods. These records shall include actual emissions for the month and the current twelve-month rolling calendar period (the total of the current month's emissions plus the emissions from the 11 months preceding the current month). These actual emissions shall include those referenced in Special Condition 13. above. An annual report of the latest 12 month rolling emission rates must be submitted to this office, attention Permit Chief for the Bureau of Waste Prevention, by January 30th following the end of each subject period. Said records shall be maintained on-site for a minimum of five (5) years, and shall be made available to Department personnel upon request. (An electronic version of both the On-site Record-keeping Forms and Report Form in Microsoft Excel format can be obtained at <http://www.state.ma.us/dep/nero/bwp/nerobwp.htm>).
18. Skyworks shall be required to submit, in writing, an Exceedance Report to the Department should the facility exceed any limitation/restriction established within this Final Approval. Said Exceedance Report shall be submitted, in writing, to this Office within seven (7) days of determination of the exceedance of the limitation. The Exceedance Report shall include identification, duration, reason for the exceedance, and remedial action plan to prevent future exceedances.

E. GENERAL CONDITIONS

1. Skyworks shall notify this Regional Office in writing after each modification/installation is complete and the equipment is ready for continuous operation, within fourteen (14) days thereof.
2. Skyworks shall maintain an Environmental Logbook, or equivalent record keeping system, which shall document all actions associated with environmental issues and overall emissions changes at the facility. The facility shall record information such as the results of federal, state, or local environmental inspections; maintenance or corrective actions related to pollution control equipment; and measures taken to lower overall emissions to the environment (air, solvent waste, etc.). This Logbook, or equivalent record keeping system, shall be made available to Department personnel upon request.
3. Skyworks shall allow Department personnel access to the plant site, buildings, and all pertinent records at all times for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

4. Please be advised that this Final Approval does not negate the responsibility of Skyworks to comply with this or any other applicable federal, state, or local regulations now or in the future. Nor does this Approval imply compliance with this or any other applicable federal, state, or local regulations now or in the future.
5. This Approval may be suspended, modified, or revoked by the Department if, at any time, the Department determines that Skyworks is violating any condition or part of this Final Approval.
6. The Department has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Environmental Affairs, for air quality purposes, was not required prior to this action by the Department. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and Regulation 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions" which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report at a later time.
7. This Approval consists of the application materials, including the application materials supporting Approvals listed in Special Condition No. 1, and this Approval letter. If conflicting information is found between these two documents, then the requirements of the Approval letter shall take precedence over the documentation in the application materials.
8. Failure to comply with any of the above described provisos will constitute a violation of the "Regulations", and can result in the revocation of the Approval granted herein. The Department may also revoke this Approval if the construction work is not begun within two years from the date of issuance of this Approval, or if the construction work is suspended for one year or more.

This Plan Approval is an action of the Department. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date you received this Plan Approval. Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

The Department may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Should you have any questions concerning this Plan Approval, please contact Mr. Mun Wong by telephone at 978-694-3286, or in writing at the letterhead address.

Very truly yours,

This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.

Mun S. Wong
Environmental Engineer
Bureau of Waste Prevention

This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.

James E. Belsky
Permit Chief
Bureau of Waste Prevention

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cc: Board of Health, 33 Plympton Street, Woburn, MA 01801
Fire Headquarters, 654 Main Street, Woburn, MA 01801
DEP, Boston, Yi Tian (e-copy)
DEP, NERO, ATTN: M. Wong, M. Altobelli, M. Persky, M. Bolis
ESS Group, Inc., 100 Fifth Avenue, 5th Floor, Waltham, MA 02451 ATTN: Mr. Mike Feinblatt